



MU2E PROCUREMENT MANAGEMENT PLAN

Version 1.1

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1. Introduction

This Procurement Management Plan describes how the Mu2e Project being constructed at Fermi National Accelerator Laboratory (Fermilab) will procure the goods and services required to accomplish the project mission. The purpose of this plan is to identify the critical procurements necessary to construct the Mu2e project, define the key roles and responsibilities of key individuals involved in Mu2e procurements and to formulate detailed advance plans and strategies such that procurement awards can be placed to minimize technical, cost and schedule risk to the Mu2e Project.

2. Responsibilities

Technical

Cost Account Managers (CAMs) are responsible for the technical definition of Project procurements. The Mu2e Project Engineers are responsible for reviewing and approving the technical component of major procurements. The technical and scientific parameters of the Project are maintained in the project database that is controlled by a Configuration Manager. Technical specifications will be reviewed for consistency with these parameters.

Procurement

The Mu2e Project Acquisition Manager will be responsible for ensuring that critical procurements comply with all Fermilab and DOE requirements and is the primary contact between the Mu2e Project Manager and the Procurement Department.

Funds Authorization

Authorization for purchase requisitions, Procard purchases, and other internal services will be given in accordance with the Mu2e signature authorization procedure defined in the Mu2e Project Management Plan (Mu2e-doc-508). Signature authority for large purchases is defined by the Fermilab Business Services Division.

3. Organization

Coordination Meetings

To maintain close communication and coordination between the Mu2e Project and the

Procurement Department, biweekly meetings will be held to ensure that the procurement process proceeds smoothly from the preparation of the Advance Procurement Plan (see Section 4) through delivery of the Critical Procurement. Decisions on procurement methods, statements of work, basis for evaluations and awards, and contract administration will be established as early as possible to avoid disruptions late in the procurement process.

Expediting Personnel

Expeditors will be assigned to the Mu2e Project during heavy phases of procurements to assist in the preparation of drawing packages, and technical, safety and quality control specifications to ensure that the procurement schedule is maintained.

4. Procurement Plan

Advance Procurement Plans

Advance Procurement Plans (APP's) are management planning tools used to describe any procurement that has special requirements or criteria (i.e., technical, cost, schedule, quality, safety, etc.). Each APP shall be created by the applicable System Manager or Cost Account Manager responsible for the item being purchased. He or she will consult with the Project Acquisition Manager for input on compliance with procurement regulations. The plan must be signed by the relevant Cost Account and System Managers, the Project Acquisition Manager, the Mu2e Project Engineers and the Mu2e Project Manager. Procurements over specific thresholds must be approved by the Mu2e Federal Project Director or designee (Deputy FPD) and the DOE Contracting Officer.

Except as otherwise determined by an APP, all procurements will be handled in accordance with Fermilab's Standard Operating Procedures, which have been approved by the U.S. Department of Energy (DOE). Any exceptions must be approved in advance by the DOE Project Director or Deputy FPD and the DOE Contracting Officer.

Each APP should include the following sections as applicable:

1. Members of APP Planning Team (including author/contact person)
2. Most Recent Estimated Cost and Baseline Cost Estimate
3. Scope of Work (SOW) (Item or System Description). This section provides an overview of the procurement and provides any details to be passed onto the vendor. As the SOW will be copied verbatim from the APP, the author should take note that this section does not contain any confidential or proprietary information that should not be divulged with potential vendors.

4. Risk Management information specific to the procurement, i.e. identify potential cost, schedule technical risks associated with the item/system; describe how the specific procurement strategy and features address these risks; identify possible project mitigation actions that may be considered or available in the event a serious cost/schedule/technical risk materializes, poor vendor performance, or other trigger event, e.g. types of vendor interactions or negotiations to be pursued (how these would be managed), identification and development of other sources, or other available options.

The following subsections may also be included in the SOW

- a. Delivery Requirements
 - i. Special testing and/or packaging requirements
 - ii. Deliverables (test data, manuals, documentation, certifications, and so forth).
 - iii. Quality/Safety requirements.
- b. Procurement Schedule
 - i. Delivery rate/schedule
 - ii. First delivery, final delivery, etc.
- c. Proposed Sources
 - i. Extent of anticipated small and disadvantaged business participation.
 - ii. Pre-qualification of sources
- d. Selection Criteria
- e. Award Criteria
 - i. Evaluation system and stated basis of award
 - ii. Designated evaluation team
- f. Finding and Determinations
 - i. Type of contract.
 - ii. Sole source or restricted source.
 - iii. Other considerations (i.e., phased funding, build to print/spec)
- g. Necessary DOE approvals
 - i. Names of approvers
 - ii. Anticipated evaluation time required by each approver.

Critical Procurements

The Mu2e Project Manager will prepare and maintain a list of critical procurements. An APP can be written to describe and/or clarify the process for any particular procurement; however an APP is required for all critical procurements. The following guidelines will be used in determining which elements of the Mu2e Project are deemed critical procurements:

1. All procurements over \$1 million for a single action or an aggregate for a series of actions involving the same item.
2. Procurement actions that require complex evaluation systems.
3. Procurements that have high technical, cost, or schedule risk.

DOE Oversight & Approvals

The Mu2e Project Office will maintain up-to-date procurement schedules, Advance Procurement Plans, and the list of Critical Procurements. These elements will be submitted to the DOE Fermi Site Office for their information along with timely updates on schedule revisions and problems. Any elements requiring DOE approval will be planned in advance and submitted in a timely manner to allow adequate review. Advance DOE signature approval by the Mu2e Federal Project Director or Deputy FPD and the DOE Contracting Officer is necessary for all procurements in excess of \$5M. Procurements impacted by the *Buy American Act* require DOE approval if they exceed \$100K. The table below indicates the level of DOE approval required for various procurement thresholds as well as the expected time duration associated with each level of approval.

Threshold	DOE Office	Additional Schedule Duration
\$5M - \$25M	Fermi Site Office	2 Weeks
Buy American Act Waiver > \$100K	Fermi Site Office	2 Weeks
Buy American Act Waiver > \$1M	Chicago Integrated Support Center	8 Weeks

Procurement Methods

Because of the nature of most of the items to be procured, procurements will be principally conducted through a negotiated procurement process (RFP, RFQ). Awards will generally be made to the lowest priced bid, assuming all technical and schedule requirements can be met. However, “best value” awards can be made if the requestor has stipulated that the evaluation permit trade-offs between technical, price, and other

designated criteria. These stipulations shall be called out explicitly in an APP.

Risk Management

Each Critical Procurement shall be analyzed to determine potential cost, technical and schedule risk. Procurement methods, contract type and special features will be used as appropriate to the risk.

1. Cost Risk

- a. Whenever practical, fixed-price contracts will be used to minimize cost risk to the Project.
- b. Fixed-price contracts with economic price adjustment may be used when there is serious doubt about the stability of labor, material or commodity prices during the life of the contract. Price adjustment can provide for both upward and downward adjustments.
- c. Requirements for related commercial items will be consolidated to enhance discounts.
- d. Indefinite Quantity/Delivery contracts may be used to permit economies of scale on items needed in substantial quantities over prescribed time periods.

2. Technical Risk

- a. Detailed technical specifications, whether defined in the APP or in an external document, will be used whenever practicable to minimize technical risk.
- b. Performance specifications will be used when detailed, technical specifications are not practicable.
- c. When appropriate, Evaluations Boards will be organized to evaluate offers on Critical Procurements to ensure appropriate cost/schedule/performance trade-offs.
- d. Offers will be evaluated to determine the vendor's level of reliability, either by reference to relevant past performance history or through pre-award surveys.
- e. Situations leading to post-award changes will be minimized.

3. Schedule Risk

- a. Realistic advance planning will ensure adequate time for orderly procurement.
- b. If appropriate, during the evaluation, vendor's facilities, capabilities and history will be reviewed to assess the vendor's abilities to perform on schedule.

5. Source Selection

1. Competition
 - a. Procurements will be made on a competitive basis to the maximum extent practicable.
 - b. For critical procurements, source development will be attempted whenever an adequate number of sources is not known or to locate small and disadvantaged business if the requirements are suitable.
2. Statements of Work
 - a. Unduly restrictive statements of work and specifications will be avoided. Detailed specifications will reflect minimum needs of the Project and functional and/or performance specifications may be used if practicable.
 - b. Statements of work will clearly describe any special conditions such as first article testing, special inspection requirements, certifications, reports, and so forth.
3. Evaluation and Award
 - a. The basis for evaluation and award will be established prior to solicitation and will be clearly stated in the solicitation.
 - b. Evaluations will adequately document the basis for the selection decisions.

Contract Administration

1. Procedures
 - a. Approved contract administration procedures will be used.
 - b. Contract terms and conditions will be actively enforced including requirements for delivery of reports. Consideration will be sought for any significant contractor performance deficiencies.
2. Changes
 - a. Contract changes will be kept to an absolute minimum. Estimates of the cost and schedule impact of changes will be fully developed prior to the issuance of a change order.
 - b. Any work to be added which falls outside of the scope of the contract will be treated as new work. Addition of such work to an existing contract will be fully justified.

6. Project Tracking of Procurement Actions

1. Critical Procurement Tracking System

- a. The Mu2e Project Office will develop, refine, and update a tracking system for all Critical Procurements.
- b. The Project Procurement Tracking System will commence tracking each critical procurement at the time an APP is determined to be necessary. The system will, at a minimum, track the following:
 - i. Requirements development to the point at which there is a complete technical package.
 - ii. Necessary approval actions, including any DOE approvals.
 - iii. Key procurement actions including pre-solicitation, publication, set-aside decisions, solicitation, evaluation, and award (and any problems therein).
 - iv. Key performance items such as reports, tests, technical problems, and any related contractual actions (for example, change orders).
 - v. Delivery schedules and costs.
 - vi. Status of liquidations (payments).

7. Conflict of Interest

1. Contractors

All contractors must complete the Representation Concerning Conflict of Interest as a condition for award of contracts in excess of \$10,000.

2. Project Personnel

The Purchasing Office will assure that those personnel defining requirements or evaluating proposals have no interest in any potential or actual competitor for such a requirement.

8. Make or Buy

The Project Office will review fabrication requirements and recommend whether to use in-house capabilities or buy the item from an outside supplier. This program applies to the fabrication of hardware and services. The goals of this program are as follows:

- a. Meet the Mu2e Project mission, cost, design, and schedule requirements effectively.
- b. Comply with obligations to support small, small disadvantaged, and women-owned business enterprises as defined by Fermilab.
- c. Efficiently use and maintain Fermilab's capabilities according to the Lab's and the DOE objectives.

9. Legal Review

Fermilab's Legal Counsel will provide input on procurement matters, as requested. The Legal Counsel will provide advice, direction, review, recommendations and approval of procurements in accordance with Fermilab and DOE policies.

10. Quality Assurance

Fermilab's Quality Assurance Program will be incorporated into the technical specification or procurement documentation requirements to assure that the purchased products meet specifications and perform as required.

11. ES&H

Control Account Managers will identify and define the materials and services that are included in each procurement, including the essential quality characteristics, ES&H, security and other requirements. Other technical, quality and ES&H advisors are consulted, as necessary. With input from the Procurement Manager, they fully define the products and services to be obtained along with the potential sources. The requirements are expressed as a statement of work or description of materials and services needed, including quality, safety and security requirements.